

In the Claims

Please amend the following claims to the form indicated below.

1. (twice amended) A method for etching a layer of silicon nitride comprising:

Sub 12
B2
etching said silicon nitride layer in the absence of a photoresist layer with an etchant consisting essentially of oxygen at a flow rate of between about 20 sccm and about 80 sccm and one of CHF₃ and CH₂F₂ at a flow rate of between about 5 sccm and about 25 sccm, wherein said etchant comprises at least about 75% of said oxygen and less than about 25% of said one of CHF₃ and CH₂F₂; and

during said etching, subjecting said silicon nitride layer to a pressure of between about 10 millitorr and about 60 millitorr.

Sub 17
B3
8. (twice amended) A method used during the formation of a semiconductor device comprising:

providing a semiconductor wafer assembly comprising at least one of a layer of silicon and a layer of silicon dioxide;

forming a layer of silicon nitride over said at least one of said layer of silicon and said layer of silicon dioxide;

etching said silicon nitride in the absence of a photoresist layer with an etch consisting essentially of oxygen and one of CHF₃ and CH₂F₂ and a pressure of between about 10 millitorr and about 60 millitorr, wherein said etch comprises at least about 75% of said oxygen and less than about 25% of said one of CHF₃ and CH₂F₂ and said etch exposes said at least one of said layer of silicon and said layer of silicon dioxide.

9. (twice amended) A method used during the formation of a semiconductor device comprising:

providing a semiconductor wafer assembly comprising a silicon wafer and a layer of silicon dioxide overlying said wafer;

forming a layer of silicon nitride over said silicon wafer and over said layer of silicon dioxide;

placing said semiconductor wafer assembly into an etch chamber;

etching said silicon nitride layer in the absence of a photoresist layer using an etch consisting essentially of oxygen and one of CHF_3 and CH_2F_2 and a pressure of between about 10 millitorr and about 60 millitorr to expose said silicon dioxide layer and said silicon wafer, wherein said etch comprises at least about 75% of said oxygen and less than about 25% of said one of CHF_3 and CH_2F_2 .